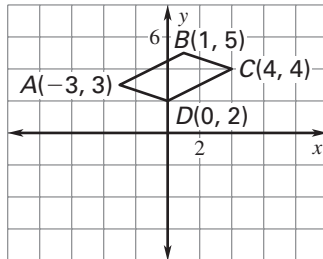


LESSON
9.3**Practice C**

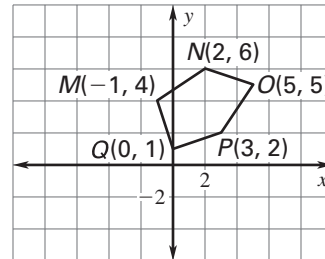
For use with pages 588–596

Graph the reflection of the polygon in the given line.

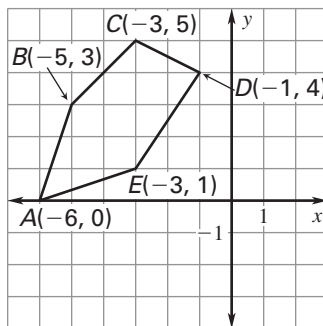
- 1.**
- x
- axis



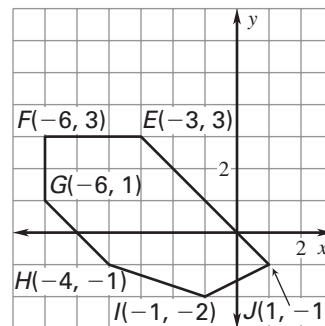
- 2.**
- y
- axis



- 3.**
- $x = -2$



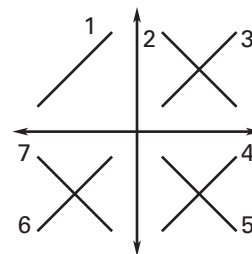
- 4.**
- $y = -x$

**Find the coordinates of the image without using a coordinate plane. Then check your answer by plotting the image and preimage on a coordinate plane.**

- 5.** $M(3, 4)$ reflected in the line $y = 1$. **6.** $N(-2, 2)$ reflected in the line $y = -1$.
7. $P(-2, 3)$ reflected in the line $x = -3$. **8.** $Q(5, -2)$ reflected in the line $x = 3$.

Use the diagram to name the image of Segment 1 after the reflection.

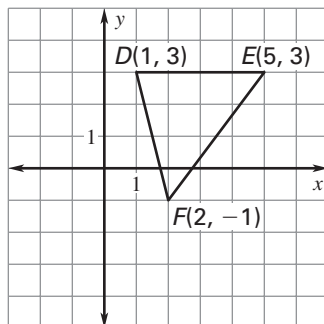
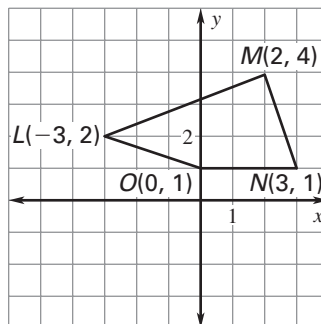
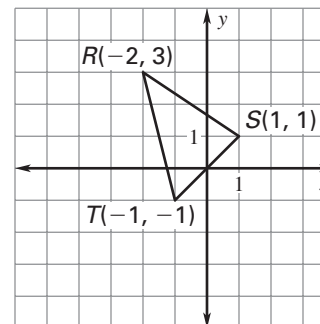
- 9.** Reflection in the x -axis
10. Reflection in the y -axis
11. Reflection in the line $y = x$
12. Reflection in the line $y = -x$
13. Reflection in the y -axis, followed by a reflection in the x -axis
14. Reflection in the x -axis, followed by a reflection in the y -axis

**Find point C on the x -axis so $AC + BC$ is a minimum.**

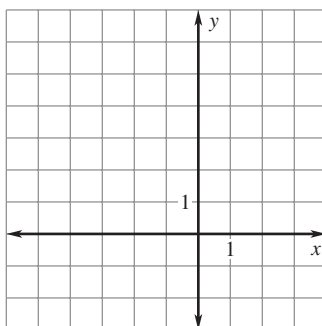
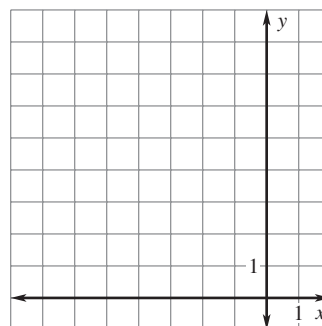
- 15.** $A(10, 2)$, $B(17, 5)$ **16.** $A(3, 2)$, $B(-3, 4)$

LESSON
9.3
Practice C *continued*
 For use with pages 588–596

Write a matrix for the polygon. Then use matrix multiplication to find the image matrix that represents the polygon after a reflection in the given line.

17. y -axis18. x -axis19. y -axis

The vertices of $\triangle ABC$ are $A(-4, 4)$, $B(0, 7)$, and $C(-1, 3)$. Reflect $\triangle ABC$ in the first line. Then reflect $\triangle A'B'C'$ in the second line. Graph $\triangle A'B'C'$ and $\triangle A''B''C''$.

20. In $y = 4$, then in $x = -1$ 21. In $x = -3$, then in $y = 5$ 

22. Algebra The line $y = 0.5x - 4$ is reflected in the line $y = -2$. What is the equation of the image?

23. Assume that Y is the reflection of X in line m , and Z is the reflection of Y in line n . Write a paragraph proof showing that distance OX is equal to distance OZ .

